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10/668,632	09/23/2003	Seung June Yi	2101-3054	2199

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EXAMINER	
BURROWES, LAWRENCE J	

ART UNIT	PAPER NUMBER
2619	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/668,632	YI ET AL.	
	Examiner	Art Unit	
	LAWRENCE J. BURROWES	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 November 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6,13-27,29-32,34-37,39-42 and 44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6,13-16,22-27,29-32,34-37 and 39-42* is/are rejected.

7)☒ Claim(s) *17-21* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 11/26/07 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 22-27 is rejected under 35 U.S.C. 102(e) as being anticipated by Willenegger.

For claim 22, Willenegger disclose a method of providing multicasting service in a mobile communication system (see column 6 lines 51-58, MBMS broadcasting system over wireless channels), comprising: simultaneously transmitting data to a plurality of terminals on a first shared physical channel (see column 7 lines 48-58 and column 10 lines 1-24, data is transmitted over the shared channels); and transmitting information on a second shared physical channel (see column 7 lines 48-58 and column 10 lines 1-24, control information is transmitted over the other shared channel), the information associated with the data transmitted on the first shared physical channel (see column 7 lines 48-58 and column 10 lines 1-24, data and control shared channels are associated in the MBMS transmission service), wherein the information received on the second shared

physical channel includes at least one of reception indicator information, channel code information, pilot bits, service data, (see column 7 lines 20-67, services are used on additional channels in any combination) and information regarding the number and size of data transmitted on the first shared physical channel (see column 9 lines 39-47, control information includes the rate which is the amount of data).

Regarding claim 23, further comprising mapping a common logic channel to the first shared physical channel (see column 10 lines 16-18, logical channel mapped to PDSCH).

Regarding claim 24, wherein the first shared physical channel is a physical downlink shared channel for data (see column 7 lines 48-53 and column 10 lines 1-24, MBMS data is mapped to PDSCH).

Regarding claim 25, wherein the second shared physical channel is a physical downlink shared channel for control (see column 7 lines 48-53 and column 10 lines 1-24, MBMS control is mapped to PDSCH).

Regarding claim 26, wherein a plurality of codes are used for the data transmitted on the first shared physical channel (see column 15 lines 7-17, multiple codes used for transmission).

Regarding claim 27, wherein data is transmitted on the second shared physical channel (see column Figure 3 Box 340, multiple physical channels).

3. Claims 29-32 rejected under 35 U.S.C. 102(e) as being anticipated by Willenegger.

For claim 29, Willenegger disclose a method of providing multicasting service in mobile communication system (see column 6 lines 51-58, MBMS broadcasting system over wireless channels), comprising: receiving data on a first shared physical channel (see column 7 lines 48-58 and column 10 lines 1-24, data is received over the shared channels by devices); receiving information on a second shared physical channel (see column 7 lines 48-58 and column 10 lines 1-24, control information is received over the other shared channel by the devices), the information associated with the data transmitted on the first shared physical channel (see column 7 lines 48-58 and column 10 lines 1-24, data and control shared channels are associated in the MBMS transmission service); and processing the data received on the first shared physical channel using the information received on the second shared physical channel (see Abstract, data received contains data that is processed by the devices), wherein the information received on the second shared physical channel includes at least one of reception indicator information, channel code information, pilot bits, service data, (see column 7 lines 20-67, services are used on additional channels in any combination) and information regarding the number and size of data transmitted on the first shared physical channel (see column 9 lines 39-47, control information includes the rate which is the amount of data).

Regarding claim 30, further comprising mapping the data to a common logic channel (see column 10 lines 16-18, logical channel mapped to PDSCH).

Regarding claim 31, further comprising using a plurality of codes to process the data received on the first shared physical channel (see column 15 lines 7-17, multiple codes used for transmission).

Regarding claim 32, further comprising: receiving data on the second shared physical channel (see column 7 lines 48-58 and column 10 lines 1-24, control information is received over the other shared channel by the devices); and processing the data received on the second shared physical channel (see Abstract, control information received contains data that is processed by the devices).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-4, 6, 13-16 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willenegger in view of Sarkkinen et al (6701155) hereafter Sarkkinen.

For claim 1, Willenegger disclose a method of providing multicasting service to a plurality of users in radio communication (see column 2 lines 64-67 and column 3 lines 1-8, multi-cast service used to communication to multiple users), the method comprising:

establishing three or more data transmission states for radio communication (see column 1 lines 8-11 and lines 23-31, services are broadcast, point to point, point to multipoint and multicast).

Willenegger does not teach employing two or more state transition conditions to change or maintain the data transmission state; and providing data of the multicasting service to the user with a particular data transmission state determined by the state transition conditions, wherein one data transmission state directly transitions to another data transmission state in accordance with the transition conditions.

Sarkkinen from the same or similar fields of endeavor teaches employing two or more state transition conditions to change or maintain the data transmission state (see column 6 lines 2-12, transmission states are point to point or point to multipoint); and providing data of the multicasting service to the

user with a particular data transmission state determined by the state transition conditions (see column 6 lines 2-12, data supplied to UE), wherein one data transmission state directly transitions to another data transmission state in accordance with the transition conditions (see column 6 lines 2-12, the SGSN will determine the state based on the information regarding the conditions in the status message).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify/implement the data transmission system of Sarkkinen into the broadcast system of Willenegger by programming the transport layers handle more than one transmission state. The motivation to do so would be so that the system resources would be reserved.

Regarding claim 2, wherein two of the data transmission states relate to a dedicated channel (see Willenegger column 6 lines 22-48, DTCH).

Regarding claim 3, wherein, of the two data transmission states, one data transmission state is based upon point-to-point data transmission, and the other data transmission state is based upon point-to-multipoint data transmission (see Willenegger column 1 lines 8-11 and lines 23-31, services are broadcast, point to point, point to multipoint and multicast).

Regarding claim 4, wherein one of the data transmission states pertains to a forward access channel (see Willenegger column 6 lines 22-48, FACH).

For claims 13 and 44, Willenegger disclose a method of providing point-to-multipoint service in a mobile communication system, comprising: establishing at least a first transmission state, a second transmission state, and a third transmission state for transmitting data to a plurality of terminals (see column 1 lines 8-11 and lines 23-31, services are broadcast, point to point, point to multipoint and multicast), wherein the first transmission state transmits data and control information to a plurality of terminals in a point-to-multipoint manner at a common channel, the second transmission state transmits data and control information, respectively, to a plurality of terminals in a point-to-multipoint manner at separate common data and common control channels, and the third transmission state transmits data and control information to a plurality of terminals in a point-to-point manner (see column 1 lines 8-11 and lines 23-31, services are broadcast, point to point, point to multipoint and multicast on the multiple channels that are mapped on the physical channels).

Willenegger disclose all the limitation of the claimed invention except selecting one of the transmission states for transmitting data based on at least one state transition condition.

Sarkkinen from the same or similar fields of endeavor teaches selecting one of the transmission states for transmitting data based on at least one state transition condition (see column 6 lines 2-12, the SGSN will determine the state based on the information regarding the conditions in the status message).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify/implement the data transmission system of

Sarkkinen into the broadcast system of Willenegger by programming the transport layers handle more than one transmission state. The motivation to do so would be so that the system resources would be reserved.

Regarding claim 15, wherein the third transmission state transmits at one of the dedicated channel and a common channel and transmits control information at a dedicated channel (see Willenegger column 7 lines 21-67, combination of services with information transmitted on dedicated, shared and control channels).

For claim 14, Willenegger disclose all the limitation of the claimed invention except wherein any one of the transmission states transition directly to any other transmission state in accordance with the at least one state transition condition.

Sarkkinen from the same or similar fields of endeavor teaches wherein any one of the transmission states transition directly to any other transmission state in accordance with the at least one state transition condition (see column 6 lines 2-12, the SGSN will determine the state based on the information regarding the conditions in the status message).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify/implement the states of Sarkkinen into the broadcast system of Willenegger by logic programming. The motivation to do so would be so that the system resources would be reserved.

For claim 6 and 16, Willenegger disclose all the limitation of the claimed invention

except wherein the at least one state transition condition comprises at least one of transmission power required for transmitting the data, the number of terminals, and a number of codes required.

Sarkkinen from the same or similar fields of endeavor teaches wherein the at least one state transition condition comprises at least one of transmission power required for transmitting the data, the number of terminals, and a number of codes required (see column 6 lines 2-12, the SGSN will determine the state based on the number of users sent in the status message).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify/implement the states of Sarkkinen into the broadcast system of Willenegger by logic programming. The motivation to do so would be so that the system resources would be reserved.

7. Claims 34-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Campbell (6944475) in view of Willenegger.

For claims 34 and 39, Campbell disclose a terminal (electronic radio system) for providing multicasting service in mobile communication system (see column 6 lines 20-22, multicasting interface), the terminal comprising:

a first transmitting/receiving module (see Figure 1 Box 106, transceiver one); a second transmitting/receiving module (see Figure 1 Box 108, transceiver two); and a processing module (see Figure 1 Box 104, processor).

Campbell teaches all the limitations of the claimed invention except transmitting/receiving data on a first shared physical channel; transmitting/receiving information on a second shared physical channel, the information associated with the data transmitted on the first shared physical channel; and processing the information received on the second shared physical channel to process the data received on the first shared physical, wherein the information received on the second shared physical channel includes at least one of reception indicator information, channel code information, pilot bits, service data, and information regarding the number and size of data transmitted on the first shared physical channel.

Willenegger from the same or similar fields of endeavor teaches transmitting/receiving data on a first shared physical channel see column 7 lines 48-58 and column 10 lines 1-24, data is transmitted/received over the shared channels by devices); transmitting/receiving information on a second shared physical channel (see column 7 lines 48-58 and column 10 lines 1-24, control information is transmitted/received over the other shared channel by the devices), the information associated with the data transmitted on the first shared physical channel (see column 7 lines 48-58 and column 10 lines 1-24, data and control shared channels are associated in the MBMS transmission service); and processing the information received on the second shared physical channel to process the data received on the first shared physical (see Abstract, data received contains data that is processed by the devices), wherein the information

received on the second shared physical channel includes at least one of reception indicator information, channel code information, pilot bits, service data, (see column 7 lines 20-67, services are used on additional channels in any combination) and information regarding the number and size of data transmitted on the first shared physical channel (see column 9 lines 39-47, control information includes the rate which is the amount of data).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify/implement the broadcast system of Willenegger into the communication block of Campbell by connection the communication block into the base stations of Willenegger. The motivation to do so would be so that the resources during the transmitting and receiving process can be shared creating more bandwidth for the system.

Regarding claims 35 and 40, a module mapping the data to a common logic channel (see Willenegger column 10 lines 16-18, logical channel mapped to PDSCH).

Regarding claims 36 and 41, the module using a plurality of codes to process the data received on the first shared physical channel (see Willenegger column 15 lines 7-17, multiple codes used for transmission).

Regarding claims 37 and 42, a module transmitting/receiving data on the second shared physical channel (see column 7 lines 48-58 and column 10 lines 1-24, control information is received over the other shared channel by the devices) and the processing module processing data received on the second

shared physical channel (see Willenegger Abstract, control information received contains data that is processed by the devices).

Response to Arguments

8. Applicant's arguments with respect to claims 1-4, 6, 13-27, 29-32, 34-37, and 39-42 have been considered but are moot in view of the new ground(s) of rejection.

9. Applicant's arguments, see page 12, filed 26 November 2007, with respect to objected drawings have been fully considered and are persuasive. The objections of the drawings has been withdrawn.

Allowable Subject Matter

10. Claims 17-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for

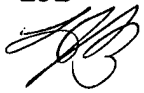
proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAWRENCE J. BURROWES whose telephone number is (571) 270-1419. The examiner can normally be reached on Monday - Thursday 5:30am - 2pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan D. Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LJB



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